

**WHAT IS CLAIMED IS:**

1 A dispenser for dispensing flat media seriatim from a discharge end thereof remote from a media storage end of thereof, said dispenser comprising:

a media storage bin at a first end thereof and a discharge chute at a second end thereof;

5 a first coarse media separator located adjacent said media storage bin at a first end of a driven rear conveyor which is intermittently driven at a first linear velocity  $V_R$  to convey the media towards a second single media separator;

a driven front conveyor associated with said single media separator, said front conveyor being intermittently driven at a second linear velocity  $V_F$ ;

10 a transport conveyor located after said front conveyor, between said front conveyor and said discharge chute, said transport conveyor being intermittently driven at a third linear velocity  $V_T$ ;

a first sensor for sensing the presence or absence of media at the discharge end of said transport conveyor;

15 a second sensor for sensing the presence or absence of media on said transport conveyor; and

a third sensor for sensing the presence or absence of media at a location between said front conveyor and said rear conveyor;

20 wherein media from the bottom of said storage bin are permitted to pass through said coarse media separator from the bottom of said storage bin in quantities of at least one media element, and are permitted to lie on said rear conveyor in single or shingled arrangement in which the leading edge of a media element overlies the trailing edge of the next adjacent media element which is closer to said single media separator;

wherein media on said rear conveyor are pulled into said single media separator one at a time by said front conveyor, and they are delivered by said front conveyor to said transport conveyor seriatim; and

wherein said rear conveyor operates only when said third sensor senses the absence of media thereat.

2. The dispenser of claim 1, wherein  $V_F > V_R$ , and  $V_T \geq V_F$ .
3. The dispenser of claim 2, wherein said media storage bin is arranged vertically or is inclined rearwardly at an angle less than  $30^\circ$  from the vertical.
4. The dispenser of claim 2, wherein each of said rear and front conveyors comprises at least two parallel conveyor belts.
5. The dispenser of claim 2, wherein said transport conveyor comprises upper and lower conveyors each having at least two parallel conveyor belts arranged so that the distance between the upper conveyor and lower conveyor is sufficient to secure single media elements therebetween in driving relationship therewith.
6. The dispenser of claim 2, wherein said media elements are chosen from the group consisting of: sheets of paper, pamphlets, booklets, brochures, catalogs, magazines, envelopes, CDs or DVDs in slip cases, CDs or DVDs in crystal cases or presentation cases, flyers, books, and, combinations thereof.
7. The dispenser of claim 2, wherein each of said coarse media separator and said single media separator is vertically adjustable so as to accommodate

the thickness of the individual media elements to be dispensed during an operating cycle of said dispenser.

8. The dispenser of claim 2, wherein said first sensor operates to stop operation of said transport conveyor when it senses the presence of media thereat.

9. The dispenser of claim 8, further comprising a box ready sensor to sense when a receiver for media being discharged from said discharge chute is capable of receiving more media, and which operates to start operation of said transport conveyor when a box ready event occurs.

10. The dispenser of claim 8, wherein whenever said front conveyor starts its operation, said transport conveyor also starts its operation.

11. The dispenser of claim 7, wherein each of said coarse media separator and said single media separator comprises a nip roller which overlies said respective rear or front conveyor, whereby media elements are pulled through the respective separator by the frictional engagement of the bottommost media element in a quantity determined by the vertical spacing of said respective nip roller away from the respective conveyor.

12. The dispenser of claim 2, wherein said rear conveyor comprises a plurality of conveyor belts arranged lengthwise along said dispenser, each being driven at said first linear velocity  $V_R$